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10/004,116	11/02/2001	Sundar Raman	01-1015	8024

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EXAMINER
AVELLINO, JOSEPH E

ART UNIT	PAPER NUMBER
2143	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _31 August 2007_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-14 and 16-19_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-14 and 16-19_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-14, and 16-19 are presented for examination; claims 1, 6, 10, 11, 13, 18, and 19 independent.

Claim Rejections - 35 USC § 101

2.   The rejection under this heading has been withdrawn.

Claim Rejections - 35 USC § 103

3.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan et al. (USPN 6,438,652) in view of Zisapel et al. (USPN 6,665,702) (hereinafter Zisapel) and further in view of Applicants Admitted Prior Art (page 2, of disclosure) (hereinafter AAPA).

4.   Referring to claim 1, Jordan discloses a method of load balancing in an upstream proxy (i.e. load monitor 120) (col. 5, lines 40-65), the method comprising:

receiving information from a plurality of downstream proxies 150 at a control node (i.e. load monitor 120) (col. 6, lines 6-25);

maintaining a list of downstream proxies (Figure 2b, ref. 102 load table; col. 6, lines 10-15);

assigning a weight to each of the downstream proxies in the list, the weight

based upon information received from the downstream proxies (col. 6, lines 6-25); and

distributing traffic load to one of the plurality of downstream proxies based in part

on the weight of each of the downstream proxies (i.e. shifting some of the forwarded

requests from an overloaded cache server to a less loaded one) (e.g. abstract; col. 6,

lines 25-30).

Jordan does not specifically state receiving a delay time between the control

node and the downstream proxies. In analogous art, Zisapel discloses another system

of load balancing which discloses the information received by the control node from the

proxies indicates a time delay (i.e. pinging, latency, TTL value) (col. 4, lines 45-56; col.

14, line 64 to col. 15, line 7). It would be obvious to a person of ordinary skill in the art

at the time the invention was made to combine the teaching of Zisapel with Jordan since

Jordan teaches that an overloaded cache server can be identified by any conventional

techniques, which includes loads taking into account the load due to forwarding

frequency (col. 6, lines 18-30). This would lead one of ordinary skill to search for other

techniques to load balance a network, finding Zisapel and its novel method using TTL

values, latency, and distance between nodes (col. 14, line 64, to col. 15, line 7).

Jordan in view of Zisapel do not disclose receiving VOIP information from

downstream proxies, and the proxies implementing the SIP protocol. In analogous art,

AAPA discloses that proxy servers can implement the SIP protocol (i.e. "arrays of SIP

proxy servers") (p. 2, lines 20-21) and pass VOIP information (i.e. call information) (p. 2,

lines 7-11, 16-19). It would have been obvious to one of ordinary skill in the art to

combine the teaching of AAPA with Jordan and Zisapel in order to provide the proxy

servers with increased call capacity and redundancy.

5.   Referring to claim 2, Jordan discloses receiving a request and using the weights

to assign a proxy (col. 6, lines 25-27).

6.   Referring to claim 3, Jordan discloses the information is indicative of the traffic

load on the downstream proxy (i.e. number of forwarded requests and number of direct

requests (col. 6, lines 15-17).

7.   Referring to claim 4, Jordan discloses the information is indicative of the number

of requests in the responses of the downstream proxy (col. 6, lines 15-17).

8.   Referring to claim 5, Jordan discloses the load is determined by querying (i.e.

probing) the processes of the downstream proxy (col. 6, lines 10-16).

9.   Claims 6-9 are rejected for similar reasons as stated above.

10.   Referring to claim 10, Jordan discloses the invention substantively as described

in claim 1. Jordan furthermore discloses sending a message to each of the proxies (i.e.

probing) (col. 6, lines 10-15). Jordan does not disclose determining a response time for

each of the messages sent to the proxies and assigning weights to each of the proxies

based on the response time. In analogous art, Zisapel discloses another method of assigning weights to a group of proxies wherein a response time is determined for each of the messages sent to the proxies (i.e. polling request and results) (Figures 2D-2E) and assigning weights (i.e. network proximity) to each of the proxies based on the response time (col. 14, lines 40-63; col. 15, lines 8-25). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Zisapel with Jordan since Jordan teaches that the load of a cache server can be a weighted sum of requests (col. 6, lines 15-17), however does not state that it is required to be this and furthermore one of ordinary skill in the art would know that it is well known there are numerous other attributes and methods to determine load and weighting of a cache server. This would lead one of ordinary skill in the art to search for other methods as to how to determine the weighting of a server, eventually finding the system of Zisapel and its novel method of utilizing the proximities of the server farms based on polling methods to determine which would be the best server farm in order to service the request.

11.   Claims 11 and 13 are rejected for similar reasons as stated above. Furthermore Zisapel discloses a location server directing the messages received by the control node to the proxies (Figure 2E, ref. 54).

12.   Referring to claims 12 and 14, Jordan in view of Zisapel discloses the invention substantively as described in the claims above. Jordan in view of Zisapel do not

disclose implementing the SIP protocol or using an INVITE message. However Jordan in view of Zisapel does disclose numerous polling methods in which to determine the proximities of the other servers (Zisapel: col. 4, lines 45-52). This would lead one of ordinary skill in the art to search other techniques in which to poll servers to elicit a response to determine the round trip time. It is also well known that the SIP INVITE message will elicit a response from a remote server to the sender (see SIP: Session Initiation Protocol, RFC 2543, p. 27, cited by Applicant in IDS). Therefore by this rationale it would have been obvious to one of ordinary skill to modify the system of Jordan in view of Zisapel in order to implement the SIP protocol to provide another polling technique since any one polling request might fail as supported by Zisapel (col. 15, lines 5-7).

13.   Referring to claim 15, Jordan in view of Zisapel disclose the invention substantively as described in claim 13. Jordan in view of Zisapel further disclose the information received by the control node from the proxies indicates a time delay (i.e. TTL value) (col. 14, line 64 to col. 15, line 7). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Zisapel with Jordan since Jordan teaches that the load of a cache server can be a weighted sum of requests (col. 6, lines 15-17), however does not state that it is required to be this and furthermore one of ordinary skill in the art would know that it is well known there are numerous other attributes and methods to determine load and weighting of a cache server. This would lead one of ordinary skill in the art to search for other

methods as to how to determine the weighting of a server, eventually finding the system of Zisapel and its novel method of utilizing the proximities of the server farms based on polling methods to determine which would be the best server farm in order to service the request.

14.   Claim 16 is rejected for similar reasons as stated above.

15.   Referring to claim 17, Jordan discloses including a plurality of records (i.e. load table) (Figure 1b, ref. 120').

16.   Claims 18 and 19 are rejected for similar reasons as stated above.

Response to Amendment

17.   The Office has considered the amendments to the independent method claims. Exemplary claim 1 does have a tangible, concrete, and useful result (i.e. distributing traffic load amongst the servers) and therefore the rejection under 35 USC 101 has been withdrawn.

Response to Arguments

18.   Applicant's arguments filed August 31, 2007 have been fully considered but they are not persuasive.

19.   Applicant argues, in substance, that (1) neither Jordan, nor Zisapel, teaches using VOIP information from a plurality of proxies and distributing traffic load according to the weights of the downstream proxies.

20.   As to point (1), Applicant is correct that neither Jordan, nor Zisapel disclose using VOIP information, since this limitation has been taught by AAPA (See rejection above). Applicant is incorrect that the "distributing traffic load" limitation is not taught. Jordan clearly teaches shifting forwarded requests from a heavily loaded server to a lighter loaded server (see rejection above). By this rationale, the rejection is maintained.

Conclusion

21.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

22.   Applicant has had numerous opportunities to amend the claimed subject matter, and has failed to modify the claim language to distinguish over the prior art of record by clarifying or substantially narrowing the claim language. Thus, Applicant apparently intends that a broad interpretation be given to the claims and the Examiner has adopted such in the present and previous Office action rejections. See In re Prater and Wei, 162 USPQ 541 (CCPA 1969), and MPEP 2111.

23.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joseph E. Avellino whose telephone number is (571)

272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

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Joseph E. Avellino, Examiner
September 15, 2007